31 cases of acute miliary tuberculosis, in 23 of which a focus of tuberculosis was carefully searched for in the blood and lymph vessels. In 22 of these cases, or 95.6 per cent., a vascular tubercle was discovered, most often in the pulmonary veins, but also in the thoracic duct, aorta, and other vessels. The author believes that these vascular tubercles of Weigert may be found in all cases of miliary tuberculosis which are carefully studied at autopsy, and explains the failure to localize this process in his 5 per cent. of negative cases principally by the difficulties of technique. The author agrees with Weigert in concluding that for the origin of the typical acute form of generalized miliary tuberculosis a localized tuberculous nodule in a vessel is necessary. It is conspicuous that the vascular tuberculosis arises only exceptionally by the extension of a tuberculous process from the surrounding tissue, but develops usually from the implantation upon the intima of the vessel of a few tubercle bacilli carried there by the blood stream. Occasionally foci of tuberculosis are found in several vessels. From these tubercle bacilli may be swept throughout the body. This fact possibly explains the occurrence of tubercles of different sizes in the same organ and in different organs.

Agglutination in Autoinfection, with Special Reference to Icterus.—Attention has been called by many observers to the fact that serum from certain jaundiced individuals possesses the power of agglutinating the typhoid bacillus.

LUDKE (*Deut. Arch. f. klin. Med.*, 1904, Bd. lxxxi. p. 34) reports the results of a series of observations and experiments bearing upon this point. He examined the blood from 32 cases of jaundice in adults due to various causes, and found that in 28 of this number the serum agglutinated the typhoid bacillus in dilutions of 1 : 20 or over. The agglutination was most constant and took place in the highest dilutions with the serum from cases of catarrhal jaundice. The agglutinating property of the serum withstood a temperature of 55° C. to 60° C. for half an hour, but was destroyed when the temperature was raised to 65° C. to 70° C for an equal length of time. The serum from 7 cases of icterus neonatorum gave no reaction with typhoid bacilli. Further studies showed that the serum from cases of nephritis and diabetes occasionally showed a mild reaction, while with cases of perityphlitis and chlorosis the reaction was frequently present, occurring in dilutions up to 1 : 60. In jaundice the serum agglutinated not only typhoid bacilli, but reacted as well toward bacillus paratyphosus, bacillus coli, bacillus lactis aërogenes, and the spirillum of cholera. Agglutination, however, was never as high or as well marked with these organisms as with bacillus typhosus. The above observations suggested that in jaundice the agglutinating power of the serum was not due to the presence of bile pigments in the blood, but was rather dependent upon a concomitant infection set up by some organism closely allied to bacillus typhosus. Further experiences substantiated this view. Typhoid bacilli were not agglutinated with bile alone, nor with blood mixed with bile. Neither was there any reaction with the serum from animals injected with bile. Taurocholic acid alone had no effect, but the serum from animals injected with this acid showed a slight and inconstant agglutinating property. The serum from animals jaundiced by means of injections of toluylendiamin and inhalations of arseniuretted hydrogen showed no increase in the agglutinating power for typhoid bacilli; though with ether injections a slight increase was noticeable.

The author concludes that the serum agglutination of typhoid bacillus may take place under three different sets of conditions: 1. After typhoid infection. 2. Following infection by other organisms, as when agglutination takes place with the sera from certain cases of catarrhal jaundice, cholelithiasis, etc. 3. Through a disturbance in the normal relation of the components of the blood, as in certain blood diseases, icterus without infections, etc.

The Disappearance of Bacteria from the Circulating Blood.—The problem of latent bacterial infections has recently received some study, and the work of Tizzoni and Panichi has shown that animals immunized against the pneumococcus may harbor in the circulating blood living pneumococci after subsequent intravenous injections for weeks or even months. SCHWARZ (*Zeitschrift f. Heilkunde,* 1905, Bd. xxvi. p. 293) records some experiments upon the disappearance of typhoid bacilli from the circulating blood of guinea-pigs after intravenous injections of subminimal lethal doses of this organism. He found that the bacteria disappeared from the blood very slowly. After small doses typhoid bacilli could be cultivated from the blood of the animals six and sometimes eight days after injection, although the actual time required for the disappearance of the bacteria from the blood seemed to be dependent upon the amount of the culture injected. The spleen, bone-marrow, and lymph glands harbored living bacteria often in large numbers long after the cultures from the blood gave no growth. These organs almost always contained typhoid bacilli fourteen days after the primary injection, and in one case the bone-marrow was found to contain living bacilli one month after the intravenous inoculation of $\frac{1}{10}$ of an oese of typhoid culture. During the first few hours after injection the numbers of bacilli decrease rather rapidly in the blood and increase proportionately in the spleen. The result of these experiments, the author believes, does not uphold the view that actively bactericidal substances circulate in the blood. The destruction of the injected bacteria may not take place suddenly in the great vessels, but rather gradually in certain organs through the activity of the body cells.

In a paper upon "General Septicæmia," DUVAL and LEWIS (*Journal of Medical Research,* 1905, vol. xiii. p. 534) report among other cases one in which there was a so-called latent infection by bacillus mucosus capsulatus in man. This organism was obtained from the blood of the patient in pure culture a day after admission to the hospital; again after a week; and even in greater numbers, as demonstrated by plate cultures, the day of discharge. On discharge the patient had apparently recovered completely from his illness and looked perfectly well. Two weeks later he was at work.

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